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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,185	10/23/2000	Jeffrey William Josten	STL000038US1	9579

			EXAMINER
22462	7590	12/16/2003	NGUYEN, CAM LINH T

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ART UNIT	PAPER NUMBER
2171	5

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 October 2000</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-41</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-41</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>23 October 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

　　a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Specification

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2.   The abstract of the disclosure is objected to because it is too brief in order to describe the invention as claimed in independent claims. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5.   Claim 34 recites the limitation "the computer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1 - 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kahn et al (U.S. 6,135,646) in view of Kawamura et al (U.S. 5,778,388).

♦ As per claim 1- 4, 12 – 15, 23 – 26, 34,

Kahn et al (U.S. 6,135,646) discloses a computer implemented system for assigning

sequence numbers, comprising:

- "A computer system" See Fig. 2, col. 5 lines 30 – 32.

- "An application" corresponds to the "digital object", which includes an "application

  and associated object" (See Fig. 9 element 64, col. 12 lines 17 – 19, Kahn).

- "Unique sequence number for assignment to an application" corresponds to the

  "handle" which is a concise unique identifier for a digital object (col. 6 lines 21 –

  24). The handle includes a serial number (See Fig. 6), which is a "sequence

  number".

- "A sequence number assignment logic, performed by the computer system" See

  col. 7 lines 61 – 64. The object management system 32 includes software that

  creates and stores digital object, therefore, it must include logic to assign a

  sequence number (as shown in fig. 6) to an application (See Fig. 9 element 80).

- "The sequence number is contained in a control page stored in a database on a data storage device" See Fig. 2, element 54.

  - "A control page" corresponds to the "handle server 1042", in Fig. 1, and Fig. 2 element 58, col. 9 lines 2 – 5. Since the handle server can return a list of pointers associated with the handle, the handle server must contain "a page" that stored the sequence number and the pointer.

  - " The management system" 54 corresponds to the "storage device".

- "A control page that contains a sequence number that has no restrictions on its size" (See Fig. 1 and 2). In particular:

  - "Sequence number that has no restrictions on its size" See col. 10 line 55 – 57.

- "An identifier that is a user-defined value that identifies a use for the sequence number" corresponds to the "serial number" in Fig. 5 – 6.

- "A range value (N) that identifies a range of sequence number assignments" See Fig. 7, col. 11 lines 29 – 43.

"A starting sequence number (Starting SN) that comprises an initial value for the sequence number" See Fig. 7. The starting sequence number for handle server #1 is 0, for handle server 2 is k+1, and so on.

Kahn, however, does not clearly disclose that the unique sequence number is recoverable. Kahn teaches that the "handle" or "sequence number" should be globally unique across the network, and should be essentially permanent (col. 10 lines 50 – 51).

Kawamura, on the other hand, discloses a method of processing a synchronization point in a database management system. Kawamura teaches "a syncpoint acquiring part 26 for guaranteeing an operation to periodically set the databases to an integral state" (col. 5 lines 58 – 60, Kawamura). Kawamura also teaches "acquiring a synchronization point (syncpoint) in said database management system for enabling a plurality of transactions to be performed concurrently in which a restart recovery process is assumed at an occurrence of a system failure "see claim 6 of Kawamura

It would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Kawamura into the system of Kahn because the motivation is to improve the accuracy of databases, keep the databases up to date for other operations, and to make the handle recoverable.

♦ As per claims 5 – 7, 16 – 18, 27 – 29, 35 - 37,

- " One or more attributes from the control page are stored in an in-memory data structure in the computer system" See Fig. 2, col. 9 lines 10 – 18 of Kahn.

- "The in-memory data structure includes one or more attributes selected from a group of attributes comprising a sequence number" See Fig. 6 of Kahn.

- "A value stored in N_REM indicates when a range of sequence numbers should be obtained from the control page" See Fig. 7 of Kahn. Each handle server includes a range of values. For example, handle server 1, the value remaining is 1 – k.

♦ As per claims 8, 19, 30, 38,

With all limitation as discussed in claims 34 – 35, further these claims include a control page is periodically saved. Kahn does not clearly show this teaching.

However, Kawamura, on the other hand, discloses a method for update the data buffer, write data into database by acquiring a syncpoint. Kawamura teaches "a syncpoint acquiring part 26 for guaranteeing an operation to periodically set the databases to an integral state" (col. 5 lines 58 – 60, Kawamura).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Kawamura into the system of Kahn because the motivation is to improve the accuracy of databases, keep the databases up to date for other operations.

♦ As per claim 9, 20, 31, 39

- " The sequence number is latched to serialize generation of the sequence number" See Fig. 6, element 144 of Kahn.

♦ As per claim 10 – 11, 21 – 22, 32 – 33, 40 – 41,

With all limitation as discussed in claims 34 – 35, further these claims include a lock to lock the control page. Kahn does not clearly show this teaching.

However, Kawamura, on the other hand, discloses a method for update the data buffer, write data into database by acquiring a syncpoint. Kawamura teaches, "the buffer pool is again locked", and "if the page write operation is terminated in the database 16 when the syncpoint acquisition flag 335 is OFF, the lock counter 328 is cleared to zero" (col. 14 lines 3 – 8, Kawamura).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Kawamura into the system of Kahn because the motivation is to improve the concurrency access for other transaction while performing the update for the database.

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-   Chandrasekaran Mohan (U.S. 5,333,303) discloses a method for providing data availability in a transaction-oriented system during restart after a failure.

-   Zbikowski et al (U.S. 5,590,318) discloses a method and system for tracking files pending processing.

-   Myre, Jr. et al (U.S. 5,043,866) discloses a soft check pointing system using log sequence numbers derived from stored data pages and log records for database recovery.

-   Kevin Lichterman (U.S. 6,363,372) discloses a method for selecting unique identifiers within a range.

-   Courts et al (U.S. 5,636,360) discloses a method for preventing overwriting cache buffer transaction entries until corresponding log buffer entries have been copied to log partition of the disk.

-   Black et al (U.S. 5,878,056) discloses a message transfer in a communication network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam-Linh T. Nguyen whose telephone number is 703-305- 1951. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703 – 872 - 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703- 305-3900.

WAYNE AMSBURY
PRIMARY PATENT EXAMINER

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